

WHAT IS CLAIMED IS:

1. A molded electrode comprising:

(a) an electrode material comprising a polymer active material, a conductivity-enhancing agent and a plasticizer and

5 (b) a current collector sheet;

the electrode material and the current collector sheet molded into one piece, and the electrode material being in a thickness of 300 μm to 9 mm and formed on at least one side of the current collector sheet.

2. A molded electrode comprising:

(a) an electrode material comprising a polymer active material, a conductivity-enhancing agent and a plasticizer and

5 (b) a plurality of current collector sheets;

the electrode material and the current collector sheets formed into one piece, and the current collector sheets spaced each other in the thickness direction of the electrode.

3. A molded electrode comprising:

(a) an electrode material comprising a polymer active material, a conductivity-enhancing agent and a plasticizer and

5 (b) at least one current collector sheet;

the electrode material and the current collector sheet

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formed into one piece, and the ratio of the volume of the electrode material and the volume of the current collector sheet being 30:1 to 100:1, provided the volume of the terminal portion of the current collector sheet is excluded from the volume of the current collector sheet.

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4. A molded electrode according to Claim 3, wherein the current collector sheet is two or more.

5. A molded electrode according to Claim 1, wherein the amount of the plasticizer is 2 to 15% by weight of the total of the electrode material.

6. A molded electrode according to Claim 2, wherein the amount of the plasticizer is 2 to 15% by weight of the total of the electrode material.

7. A molded electrode according to Claim 3, wherein the amount of the plasticizer is 2 to 15% by weight of the total of the electrode material.

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8. A molded electrode according to Claim 1, wherein the electrode material (a) has unevenness at the surface.

9. A molded electrode according to Claim 2, wherein the electrode material (a) has unevenness at the surface.

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10. A molded electrode according to Claim 3, wherein the electrode material (a) has unevenness at the surface.

11. A method for producing a molded electrode, which comprises a step of:

hot pressing (a) an electrode material which is a mixture of a polymer active material, a conductivity-

5 enhancing agent and a plasticizer and (b) at least one current collector sheet.

12. A method for producing a molded electrode, which comprises steps of:

(i) hot pressing (a) an electrode material which is a mixture of a polymer active material, a conductivity-

5 enhancing agent and a plasticizer and (b) at least one current collector sheet to form a molded material and

(ii) conducting once or more times step of

(ii-1) hot pressing the molded material, the same electrode material and a current collector sheet, or/and

10 (ii-2) laminating and hot pressing a plurality of molded materials each produced as above,

whereby forming a one-piece molded electrode comprising the electrode material and a plurality of current collector sheets spaced each other in the thickness direction of the electrode.

13. A method according to Claim 11, wherein the amount of the plasticizer is 2 to 15% by weight of the total of the electrode material.

14. A method according to Claim 12, wherein the amount of the plasticizer is 2 to 15% by weight of the total of the electrode material.

15. A method according to any of Claims 11, wherein, in the hot pressing, a die having unevenness at the surface is used to form unevenness at the surface of the molded electrode.

16. A method according to any of Claims 12, wherein, in the hot pressing, a die having unevenness at the surface is used to form unevenness at the surface of the molded electrode.

17. A secondary battery using a molded electrode set forth in Claim 1, as at least either of the positive electrode and the negative electrode.

18. A secondary battery using a molded electrode set forth in Claim 2, as at least either of the positive electrode and the negative electrode.

19. A secondary battery using a molded electrode set forth

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b2

in Claim 3, as at least either of the positive electrode and
the negative electrode.

